

Notice of Allowability

Application No.

10/695,168

Examiner

DON N. VO

Applicant(s)

JENSEN, JAMES ROBERT

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed on 10/27/03 and telephone interview on 5/10/06.
2. ☒ The allowed claim(s) is/are 1-46.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20050510</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>10/27/03</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Christopher Darrow (Reg. No. 30,166) on 5/10/06.

The application has been amended as follows:

In claim 14, line 1, "The digital data transmitting system according to claim 1" has been changed to – The method according to claim 13 --;

In claim 15, line 1, "The digital data transmitting system" has been changed to – The method --;

In claim 16, line 1, "The digital data transmitting system" has been changed to – The method --;

In claim 17, line 1, "The digital data transmitting system" has been changed to – The method --;

In claim 18, line 1, "The digital data transmitting system" has been changed to – The method --;

In claim 19, line 1, "The digital data transmitting system" has been changed to – The method --;

In claim 20, line 1, "The digital data transmitting system" has been changed to – The method --;

In claim 21, line 1, "The digital data transmitting system" has been changed to
– The method --;

In claim 22, line 1, "The digital data transmitting system" has been changed to
– The method --;

In claim 36, line 1, "receiver" has been changed to – method --;

In claim 37, line 1, "receiver" has been changed to – method --;

In claim 38, line 1, "receiver" has been changed to – method --;

In claim 39, line 1, "receiver" has been changed to – method --;

In claim 40, line 1, "receiver" has been changed to – method --;

In claim 41, line 1, "receiver" has been changed to – method --;

In claim 42, line 1, "receiver" has been changed to – method --;

In claim 43, line 1, "receiver" has been changed to – method --;

In claim 44, line 1, "receiver" has been changed to – method --;

In claim 45, line 1, "receiver" has been changed to – method --.

2. The examiner approves the drawings filed on 10/27/03.

3. The following is an examiner's statement of reasons for allowance:

References Fullam et al (6,023,779), Mark (5,825,871), Koseki et al (2003/0196539) and McKnight et al (2004/0081313) are cited because they are pertinent to the communication system using acoustic tones. However, none of the cited references teaches or suggests, in combination, the arrangements of a

generator for generating digital data bits, said digital data bits including at least one check bit; an error correction and interleaving system for adding at least one error correction bit to the digital data bits to form a data sequence; an encoder for encoding each bit in the data sequence with a signal having the at least one acoustic tone to form an encoded sequence, the frequency of the at least one tone lying between 20Hz and 20kHz; and an audio speaker for transmitting the encoded sequence in order to form a digital data transmitting system using an acoustic tone as recited in claim 1 and the system as recited in claim 46 and the corresponding method steps as recited in claim 13 and further limitations of their respective dependent claims 2-12 and 14-22 or a first and a second set of filters for filtering the received acoustic tone based signal; a first and a second detector for determining the magnitude of the complex domain output from the first and the second set of filters respectively; a difference operator for generating a difference between a transformed output from the first detector and a transformed output from the second detector at an output of said difference operator; means for detecting a digital word, said digital word obtained from a bit detector, wherein the input to the bit detector is the output of said difference operator; a buffer for storing the detected digital word; and means for error correcting the stored digital word for determining the digital data in order to form a receiver for detecting digital data in an acoustic tone based signal as recited in claim 23 and the corresponding method steps as recited in claim 35 and further limitations of their respective dependent claims 24-34 and 36-45.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DON N. VO whose telephone number is (571) 272-3018. The examiner can normally be reached on MON - FRI (9:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAY PATEL can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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